Factors that Influence Cadet's Learning Satisfaction: A Literature Review

Ade Irfansyah[1*], Suparji[2], Bambang Suprianto[3], Cris Kuntadi[4]
[1])Universitas Negeri Surabaya, Indonesia, ade.21015@mhs.unesa.ac.id
[1])Politeknik Penerbangan Surabaya, Indonesia, ade_irfansyah@poltekbangsby.ac.id
[2])Universitas Negeri Surabaya, Indonesia, suparji@unesa.ac.id
[3])Universitas Negeri Surabaya, Indonesia, bambangsuprianto@unesa.ac.id
[4])Universitas Bhayangkara Jakarta Raya, Indonesia, cris.kuntadi@dsn.ubharajaya.ac.id

*Corresponding author: Ade Irfansyah

Abstract: An essential metric for determining the caliber of education is how happy students are with their educational experience. The phenomenon of learning satisfaction is an important area of this study, particularly in the context of official schools in aviation. Cadets who go on to hold significant positions in the country's government and aviation sector receive crucial growth and training at aviation polytechnics. The publication of articles in relevant previous research will have a function as a reinforcement of theories and phenomena of relationships or influences between variables that are being studied. This study aims to produce a hypothesis of influence between variables that are used as a reference in future studies. This article is a type of literature review that raises the relationship between factors that affect student learning satisfaction, such as learning content, learning motivation, and student interaction with teachers. The results of this study are that (1) learning content has a very significant effect on learning satisfaction, (2) learning motivation affects learning satisfaction, and (3) student interaction with teachers has a very strong effect on learning satisfaction.

Keywords: Learning Satisfaction, Learning Content, Learning Motivation and Student Interaction With Teachers, Education.

INTRODUCTION

The satisfaction of students with their learning experience is an important indicator of the quality of education. Satisfied students are more likely to be engaged in the learning process, to have a positive attitude towards learning, and to achieve better academic performance. Therefore, it is important to understand the factors that influence student learning satisfaction.

The phenomenon of learning satisfaction is an important area of this study, particularly in the context of official schools in Aviation. Aviation polytechnics play a critical role in the development and training of cadets who will go on to serve in important roles in the country's government and aviation industry.

As such, it is essential to understand the factors that contribute to the learning satisfaction of cadets in these schools, to ensure that they receive the best possible education and training. Factors that have been identified as important include the learning content, the learning motivation, and the student interaction with the teacher.

Previous research on learning satisfaction in official schools in Indonesia has focused primarily on the experiences of cadets in military academies. However, there is a need to expand this research to include other types of official schools, such as police academies and other similar institutions, to gain a more comprehensive understanding of the phenomenon.

This article is a type of literature review that raises the relationship between factors that affect student learning satisfaction, namely factors of learning content, learning motivation, and student interaction with teachers. This article is a literature review in the field of education. The purpose of this study is to produce a hypothesis of influence between variables that are used as a reference in future studies. The findings of this research will provide valuable insights into the factors that contribute to learning satisfaction among cadets in official schools in Aviation and will help to inform efforts to improve the quality of education and training in these institutions.

The research problem that this paper aims to investigate is: What are the factors that contribute to cadet satisfaction in aviation official schools and how can institutions improve it? Based on the research problem, this research will be discussed and can be formulated to build hypotheses for further research, (1). does learning content affect learning satisfaction? (2) does learning motivation affect learning satisfaction? (3) does student interaction with teachers affect learning satisfaction?

This problem is important because it can provide insights into the areas that institutions need to focus on to improve cadet satisfaction. Additionally, it can inform the development of policies and programs that can improve the overall effectiveness of higher education institutions.

THEORETICAL STUDIES
Learning Satisfaction

Learning satisfaction is a positive value for all students towards a measurable learning experience that is carried out after carrying out full learning activities (Nagy, 2018). Learning satisfaction is a condition of a feeling of satisfaction due to the fulfillment of student expectations from a learning process that he does (Dwiyana Putra, 2019). Satisfaction is a feeling where hopes, needs, and desires can be met by a ministry (Aktan et al., 2010). Learning satisfaction theory examines the position of students as consumers who can respond to teaching and learning based on a comparison between expectations and accepted reality (Wu et al., 2015). Cadet learning satisfaction refers to the level of contentment and fulfillment that the cadet's official school in aviation experiences while participating in their training program.

Factors that can impact cadet learning satisfaction include the quality of instruction, the relevance of the training material to their career goals, the level of support and resources provided, and the overall atmosphere and culture of the academy (Terziev & Nichev, 2017). Ensuring cadet learning satisfaction is important as it can have a positive impact on the cadets' motivation, engagement, and success in their training program. There are dimensions and indicators of learning satisfaction that are expected to affect learning satisfaction, namely: (1) good teaching, (2) good e-resources, (3) assessment, (4) learning content, (5)

perceived flexibility, (6) perceived usefulness, (7) learner-learner interactions, (7) learner-instructor interactions, and (8) self-regulated learning. (Indarti, 2021). The dimensions or indicators of learning satisfaction according to par experts are (1) teacher Attendance, (2) teacher Expertise, (3) learning structure and organization, (4) quality of learning, (5) student motivation, (6) student participation, (7) learning environment, dan (8) classroom facilities.

This learning satisfaction has been widely researched by previous researchers, including an article entitled *Evaluation of Online Video Usage and Learning Satisfaction: An Extension of the Technology Acceptance Model* (Nagy, 2018), *Analysis of Factors Affecting Student Satisfaction* (Rahmawati, n.d.), *Factors Affecting Vocational Student Distance Learning Satisfaction During the Covid-19 Pandemic* (Indarti, 2021) *The Role of Learning Satisfaction in Measuring Learning Quality and Learning Outcomes* (Dwiyana Putra, 2019), *The Effects Of Learner Characteristics On Satisfaction In Distance Education* (Aktan et al., 2010), and then *What's The Relationship Between Learning Satisfaction And Continuing Learning Intention?* (Wu et al., 2015). These articles are currently a reference source for research because they raise the same variable theme, namely learning satisfaction. The results of the review of the reference articles can be seen in table 1.

Learning content is the most important thing in the teaching and learning process (Cucus et al., 2016). Learning content is a learning program, and learning design, which contains a description, scope objectives, and evaluation of learning (Rajadurai et al., 2018). Learning content, motivation, and attitudes significantly affect employee learning satisfaction (Jafari Navimipour & Zareie, 2015). Students who are more engaged with learning content will demonstrate a higher level of understanding and mastery of the topic thus fostering learning satisfaction (Hamid et al., 2015). Well-crafted learning content can facilitate learning, generate learning satisfaction and increase learning motivation (Indarti, 2021).

Motivation is a change in energy in one's person characterized by the onset of feelings or reactions to achieve goals (Hamalik, 2008). Learning motivation is the tendency of students to carry out learning activities driven by the desire to achieve the best possible learning outcomes. Learning motivation will encourage enthusiasm for learning in students and vice versa lack of learning motivation will weaken enthusiasm for learning which will also affect student learning outcomes (Ayu Nirmala et al., 2014). Research from I Ying Chang in 2012 showed the results of the analysis that (1) learning motivation and learning environment towards learning satisfaction were partially significantly correlated, (2) learning and teacher motivation and teaching and learning satisfaction were partially significantly correlated, (3) learning motivation and learning content and material to learning satisfaction was significantly positively correlated, (4) learning motivation and learning satisfaction of administrative services were positively correlated Significant.

Student-teacher interaction is a two-way communication between the teacher in the learning process and students as learners, which can take the form of guidance, support, evaluation, and encouragement (Moore, 1996). Interaction between students involves two-way mutual communication among students, with or without the presence of the teacher. By interacting with fellow students, students can exchange ideas and get feedback from others, the results of Nabila Devi Indah's research in 2021 show that: (1) interaction has a significant effect on online learning satisfaction, (2) interaction has a significant effect on social presence, (3) teacher presence has no effect on online learning satisfaction, (4) teacher presence has a significant effect on social presence, and (5) social presence has a significant effect on online learning satisfaction, (6) significant interaction has an indirect effect on online learning satisfaction through the social presence and (7) teacher attendance indirectly has an insignificant effect on online learning satisfaction through social presence.

Table 1. Relevant Previous Research Result

No	Author (year)	Previous Research Results	Similarities with this article	Differences with this article
1	Indarti (2021)	Good e-resources, learning content, perceived usefulness and interaction between learners and lecturers, and learner-instructor interaction, affect learning satisfaction.	Learning opportunities, learning motivation, and student interaction with teachers affect learning satisfaction	Learning resources and perceived benefits affect learning satisfaction
2	Dwiyana (2019)	The presence of teachers, teacher expertise, learning organization, quality of learning, student motivation, student participation, learning environment, and classroom facilities affect learning satisfaction	Individual characteristics: learning motivation, material conditions, and learning facilities, peer relationships can affect learning satisfaction.	teachers and the instructional activity, learning outcomes, and learning environment also affect student learning satisfaction
3	(Jafari Navimipour & Zareie, 2015)	Technology, learning content, student motivation, and student attitude affect learning satisfaction	Learning content, and student motivation affect student learning satisfaction	Technology and attitudes affect learning satisfaction
4	(Hamid et al., 2015)	Learning will gain a higher level of understanding and mastery of the topic, thus fostering learning satisfaction	Learning content affects learning satisfaction	Learning content also affects the level of understanding, and mastery of the topic.
5	(Chang, 2012)	Motivation learning and learning environment, teacher content and material, affects learning satisfaction	Learning motivation, learning material, or content affects learning satisfaction	The learning environment, teacher motivation, and administrative services affect learning satisfaction
6	(Nabila Devi Indah, 2021)	Student interaction with teachers, teacher attendance, and social presence, have a significant effect on learning satisfaction	Student interaction with teachers has a significant effect on learning satisfaction	Student interaction with teachers and social presence has a significant effect on learning satisfaction. Teacher attendance does not affect learning satisfaction

DISCUSSION

It would be helpful to have more information on the specific context of the cadets and their learning satisfaction being analyzed. However, in general, an analysis of cadets' learning satisfaction would involve gathering data on their perceptions of the quality and effectiveness of their training and education, and then interpreting that data to identify patterns and trends. This could include surveying cadets to gather their feedback on various aspects of their training, such as the quality of instruction, the relevance of the material, and the overall learning environment. The results of the analysis could be used to inform decisions about how to improve the training and education provided to cadets.

The effect of learning content on learning satisfaction

Learning content, learning motivation, and student interaction with teachers affect learning satisfaction (Indarti, 2021). To get learning satisfaction in students, a teacher must pay attention to the quality of learning content. The quality of learning content should be very well made, so that it has a clear character, and is interesting. The development of content or learning resources by integrating them with Information and Communication Technology (ICT), is the best way to develop a learning system so that the content becomes more interesting.

Learning content that can foster learning satisfaction must be made attractively (Wahyono, 2019). Learning content will have a significant effect on learning satisfaction if the learning content is made as attractive as possible by the teacher so that students are happy to linger to learn a certain material (Oktiana G. D, 2015). Interesting content will foster learning satisfaction because students have the motivation to continue learning.

Learning content affects learning satisfaction following the results of research conducted by Indarti in 2021. Indarti stated that good e-resources, learning content, perceived usefulness, and interaction between learners and lecturers (learner-instructor interaction) affect learning satisfaction (Indarti, 2021). Indarti's research is in line with this research in the statement that learning opportunities, learning motivation, and student interaction with teachers affect learning satisfaction. While the results of Indarti's research that are not discussed in this study are learning resources, the perceived benefits affect learning satisfaction.

Meanwhile, research conducted by Dwiyana Putra in 2022 found that the presence of teachers, teacher expertise, learning organization, learning quality, student motivation, student participation, learning environment, and classroom facilities affect learning satisfaction.(Dwiyana Putra, 2019). The results of Dwiyana Putra's research are in line with this research, namely that the condition of *material conditions and learning facilities* affects learning satisfaction. Meanwhile, the findings that were not discussed in this study were teachers and learning activities, learning outcomes, and learning environment also affects student learning satisfaction.

Jafari Navimipour and Zareie 2015 conducted a similar study by obtaining the results that technology, learning content, student motivation, and student attitudes affect learning satisfaction. Jafari's findings that are following this study are that learning opportunities and student motivation affect student learning satisfaction.(Jafari Navimipour & Zareie, 2015). Meanwhile, the research results that are not included in the topic of discussion of this study are Technology and attitudes affect learning satisfaction.

The next study was conducted by Hamid and colleagues in 2015, which found that learning skills would gain a higher level of understanding and mastery of the topic, thus fostering learning satisfaction.(Hamid et al., 2015). Hamid's research has something in common with this research, namely that learning affects learning satisfaction. While the results of the research that were not discussed in this study were Learning content also affects the level of understanding, and mastery of the topic.

Chang's research in 2012, found that learning and learning environments, teachers, and material content, influenced learning satisfaction.(Chang, 2012). Chang's findings are in line with this study, stating that learning materials or content affect learning satisfaction. And several things are not discussed in this study, namely that learning environment, teacher motivation, and administrative services affect learning satisfaction.

The effect of learning motivation on learning satisfaction

Learning motivation affects learning satisfaction through learning outcomes (Jafari Navimipour & Zareie, 2015). To be able to increase learning satisfaction from good learning outcomes, you must pay attention to the existence of learning motivation from students (Chang, 2012). To increase student learning satisfaction by paying attention to the existence of high motivation from students, which must be done by the teacher to foster student motivation at every opportunity (Supriatin, n.d.). Student learning motivation will affect learning satisfaction if learning motivation is owned by students so that they can increase good understanding of learning and simultaneously will also increase learning satisfaction (Hamid et al., 2015).

The motivation to learn that affects learning satisfaction is in line with several previous studies such as those conducted by Jafari in 2015. Zafari found that technology, learning content, student motivation, and student attitudes affect learning satisfaction(Jafari Navimipour & Zareie, 2015). Jafari's findings are in line with this study, namely that student motivation affects student learning satisfaction. Meanwhile, what is not discussed in this study is that technology and attitude affect learning satisfaction.

A study conducted by Dwiyana Putra in 2019 and Chang in 2012 obtained the result that student motivation affects learning satisfaction and this is in line with this research. Meanwhile, the results of the second study that are not included in the discussion of this study are that the learning environment, teacher motivation, administrative services, teachers and learning activities, learning outcomes, and learning environment affect learning satisfaction.

The effect of student interaction with teachers on learning satisfaction

Student interaction with teachers has a significant effect on learning satisfaction (Nabila Devi Indah, 2021). Increasing learning satisfaction through student interaction with teachers requires student activity in interacting with teachers during the learning process (NE Etty, 2015). The effect of student interaction with teachers affects learning satisfaction, if student interaction with teachers is truly understood by students and teachers, it will increase student learning satisfaction (Nabila Devi Indah, 2021).

Student interaction with teachers affects learning satisfaction following the results of research conducted by Nabila in 2021. His second study found that student interaction with teachers affects student satisfaction. Meanwhile, the results of the research that were not discussed in this study were that social presence had a significant effect on learning satisfaction and teacher attendance did not affect learning satisfaction.

Conceptual Framework

A conceptual framework is a theoretical structure that helps to explain the relationships among the different variables or concepts being studied in a research project. It provides a visual representation of the key concepts and how they are related and guides the researcher in defining and measuring the variables of interest.

A conceptual framework typically includes: (1) the main concepts or variables being studied, such as the independent and dependent variables, (2) the relationships between the concepts or variables, such as cause and effect or correlation, (3) the theoretical or empirical basis for the relationships, such as existing theories or previous research, (4) the assumptions or hypotheses that guide the research, such as expectations about the direction or strength of the relationships between the variables.

The conceptual framework serves as a guide for the researcher in designing the research, collecting and analyzing data, and interpreting the results. It helps to ensure that the research is focused, well-organized and consistent, and allows the researcher to identify any potential limitations or biases in the study. It is important to note that, a conceptual

framework can be developed before or after the data collection process. It's also important to use existing theories and literature review in developing the conceptual framework.

The conceptual framework in this study is shown in figure 1, showing the relationship between several variables used in this study. The variables of this study used three free variables and one bound variable. Exogenous variables in this study are learning content (X1), learning motivation (X2), and student interaction with teachers (X3). While the endogenous variable used is learning satisfaction (Y). From the relationship between exogenous and endogenous variables, three hypotheses H1, H2, and H3 were obtained. The first hypothesis (H1) is that there is an influence of learning content (X1) on learning satisfaction (Y). The second hypothesis (H2) is that there is an influence of learning motivation on learning satisfaction (Y). The third hypothesis (X3) is that there is an influence of student interaction with a teacher on learning satisfaction.
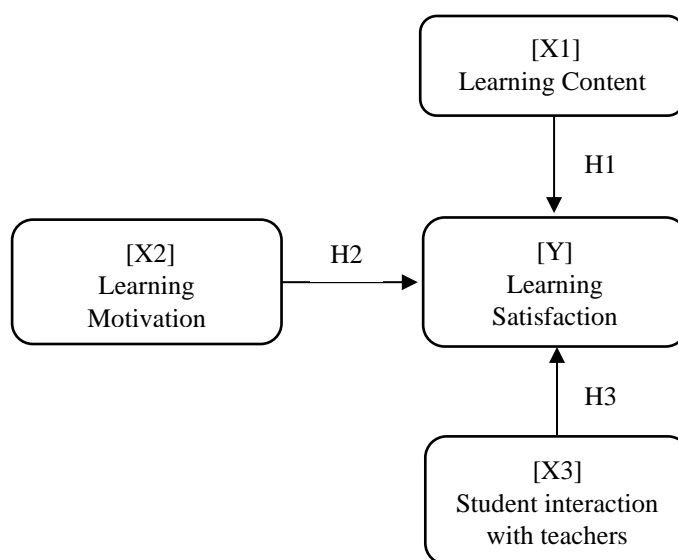

Figure 1. Conceptual Framework

Based on the above conceptual framework, learning satisfaction is influenced by learning content, learning motivation, and student interaction with the teacher. In addition to the three exogenous variables that affect learning satisfaction, many other variables affect it, including (1) learning resources (Indarti, 2021), (2) benefits of studying (Indarti, 2021), (3) teacher quality (Dwiyana Putra, 2019), (4) learning activities (Dwiyana Putra, 2019), (4) learning outcomes (Dwiyana Putra, 2019), (5) learning environment (Dwiyana Putra, 2019); (Chang, 2012), (6) technology: (Jafari Navimipour & Zareie, 2015), (7) student attitude (Jafari Navimipour & Zareie, 2015), (8) teacher motivation (Chang, 2012), dan (9) administrative services (Chang, 2012). Several other variables that were found as factors that affect learning satisfaction derived from the results of literature reviews in this study can be used as material in subsequent studies.

CONCLUSIONS AND RECOMMENDATION
Conclusions
The study found that three factors significantly influence student learning satisfaction: learning content, learning motivation, and student-teacher interaction. The findings of this study provide important information for educators and educational policymakers to improve student learning satisfaction and academic performance.

The results of these findings can be implemented in the aviation official school education system. Cadets in official schools are expected to have a high level of learning satisfaction, including being able to improve their learning outcomes both in education and in training. Some things that can increase cadet learning satisfaction are by improving the quality of learning content in the academic world, packaging it with a more attractive appearance, or combining work culture in the industry in the curriculum and the learning content. The next thing to increase learning satisfaction from cadets is to increase learning motivation so that learning is not considered a burden of life but a necessity in their lives. And the last is to improve the relationship or interaction between the cadets and the teachers. It is intended that the transfer of knowledge, skills, and attitudes can be carried out at any time without being limited to the learning schedule. Sehigga cadets will get a lot of knowledge, qualified skills to a good attitude.

Recommendation

Based on the conclusions above, the suggestion in this article is that many other factors affect learning satisfaction, apart from learning content, learning motivation, and student interaction with teachers at all types and levels of organizations or companies, therefore further studies are still needed to find out what other factors can affect learning satisfaction besides the variability studied in this article. Other factors include (1) learning resources, (2) learning benefits, (3) teachers, (4) learning activities, (5) learning outcomes, (6) learning environment, (7) technology, (8) student attitude, (9) teacher motivation, and (10) administrative services.

REFERENCES
Aktan, F., Cilesiz, S., & Macbeth, D. (2010). *THE EFFECTS OF LEARNER CHARACTERISTICS ON SATISFACTION IN DISTANCE EDUCATION*.
Ayu Nurmala, D., Endah Tripalupi, L., & Suharsono, N. (2014). PENGARUH MOTIVASI BELAJAR DAN AKTIVITAS BELAJAR TERHADAP HASIL BELAJAR AKUNTANSI. In *Tahun* (Vol. 4, Issue 1).
Chang, I.-Y. (2012). THE EFFECT OF STUDENT LEARNING MOTIVATION ON LEARNING SATISFACTION. *The International Journal of Organizational Innovation*, *4*.
Cucus, A., Aprilinda, Y., & Endra, R. Y. (2016). *Explore-Jurnal Sistem Informasi dan Telematika PENGEMBANGAN E-LEARNING BERBASIS MULTIMEDIA UNTUK EFEKTIVITAS PEMBELAJARAN JARAK JAUH*.
Dwiyana Putra, I. D. G. R. (2019). *Peran Kepuasan Belajar dalam Mengukur Mutu Pembelajaran dan Hasil Belajar*. http://ejournal.ihdn.ac.id/index.php/JPM
Hamalik, O. (2008). *Proses Belajar Mengajar*. Bumi Angkasa.
Hamid, S., Waycott, J., Kurnia, S., & Chang, S. (2015). Understanding students' perceptions of the benefits of online social networking use for teaching and learning. *Internet and Higher Education*, *26*, 1–9. https://doi.org/10.1016/j.iheduc.2015.02.004
Indarti. (2021). *FAKTOR-FAKTOR YANG MEMPENGARUHI KEPUASAN BELAJAR JARAK JAUH MAHASISWA VOKASI DI MASA PANDEMI COVID-19*.
Jafari Navimipour, N., & Zareie, B. (2015). A model for assessing the impact of e-learning systems on employees' satisfaction. *Computers in Human Behavior*, *53*, 475–485. https://doi.org/10.1016/j.chb.2015.07.026
Moore, M. G. (1996). *In Distance Education*.
Nabila Devi Indah, S. (2021). *PENGARUH INTERAKSI, KEHADIRAN PENGAJAR DAN KEHADIRAN SOSIAL TERHADAP KEPUASAN PEMBELAJARAN ONLINE PADA*

MATA PELAJARAN EKONOMI DI SMA NEGERI 13 SURABAYA PADA MASA COVID-19.

Nagy, J. T. (2018). Evaluation of Online Video Usage and Learning Satisfaction: An Extension of the Technology Acceptance Model. In *International Review of Research in Open and Distributed Learning* (Vol. 19).

NE Etty. (2015). *PERAN KOMUNIKASI DALAM INTERAKSI GURU DAN SISWA*.

Oktiana G. D. (2015). *Pengembangan media pembelajaran berbasis android Dalam bentuk buku saku digital untuk mata pelajaran Akuntansi kompetensi dasar membuat ikhtisar siklus Akuntansi perusahaan jasa di kelas xi man 1 Yogyakarta tahun ajaran 2014/2015*.

Rahmawati, D. (n.d.). *ANALISIS FAKTOR-FAKTOR YANG MEMPENGARUHI KEPUASAN MAHASISWA*.

Rajadurai, J., Hisham Jaafar, A., Noordiana, W., & Hanafi, W. (2018). Article in Global Business and Management Research. In *An International Journal*. https://www.researchgate.net/publication/330037717

Supriatin, S. (n.d.). *UPAYA GURU DALAM MENINGKATKAN MOTIVASI BELAJAR SISWA*.

Terziev, V., & Nichev, N. (2017). ANALYSIS OF THE ENVIRONMENT FOR MILITARY EDUCATIONAL SYSTEM FUNCTIONING AND ITS IMPACT ON THE PREPARATION OF CADETS FOR MILITARY PROFESSIONAL ACTIVITIES IN THE REPUBLIC OF BULGARIA. In *IJAEDU-International E-Journal of Advances in Education* (Vol. 3). http://ijaedu.ocerintjournals.org

Wahyono, H. N. (2019). Pengembangan Media Pembelajaran Ekonomi Interaktif Berbasis Android Sebagai Upaya Peningkatan Aktivitas dan Hasil Belajar Siswa. *Gulawentah:Jurnal Studi Sosial*, *4*(2), 74. https://doi.org/10.25273/gulawentah.v4i2.5522

Wu, Y.-C., Hsieh, L.-F., & Lu, J.-J. (2015). What's The Relationship between Learning Satisfaction and Continuing Learning Intention? *Procedia - Social and Behavioral Sciences*, *191*, 2849–2854. https://doi.org/10.1016/j.sbspro.2015.04.148